REMARKS

Independent claims 85, 101, 117 and 131 have been amended to more clearly distinguish the invention over the prior art of record.

Taking claim 85 by way of example, this now reads as:

> *"A method of controlling a flow of frame based data comprising the steps of:*
>
> *receiving frame based data at a synchronous digital network multiplexer providing an interface between a wide area synchronous digital network and a local area network at a first rate of data transmission of said local area network, said data being for transmission over said wide area synchronous digital network, said multiplexer configured to map frame based data into synchronous digital network virtual containers; and*
>
> *at said multiplexer:*
>
> *storing said data in a buffer;*
>
> *monitoring an amount of said data stored in said buffer with respect to a data amount threshold level for said buffer;*
>
> *determining that said amount is greater than said threshold level; and*
>
> *in response to said step of determining, generating a signal for adapting said first rate to a second rate of data transmission of said local area network, said second rate being lower than said first rate; and*
>
> *using said generated signal to adapt the data transmission rate of the local area network from the first rate to the second rate."*

Basis for the changes to the independent claims can be found at page 8, line 31 through to page 12, line 6 and, in particular, at page 9, lines 29 to 33 and figure 2.

It will be noted that claim 85 has been amended to clarify that the frame based data flow control method is applied to data buffered at a synchronous digital network multiplexer and that flow control is exercised in respect of the transmission rate in the local area network. There is ample support in the specification for the replacement of the term "reception" by the expression "data transmission".

The invention as defined by claim 85 relates to the situation where flow control is applied to frame based data being transmitted from a local area network to a synchronous digital network multiplexer for transmission over a wide area synchronous digital network where the rate of transmission of the local area network is too great for the buffers at the multiplexer to handle. If a buffer threshold level is exceeded then a signal is generated in the synchronous network multiplexer to adapt the data transmission rate of the non-synchronous local area network to a lower level.

Independent method claim 101, on the other hand, defines the situation where the data rate adaptation method is applied at a synchronous digital network multiplexer providing an interface between a first local area network and the wide area synchronous digital network after frame based data (encapsulated in SDH/SONET virtual containers) has been received over the synchronous digital network from a second, remote local area network. Thus, the flow control method applied at the multiplexer is used to adapt the data transmission rate of the remote local area network after the frame based data has been carried over the wide area synchronous digital network.

Independent claims 117 and 131 are counterpart apparatus claims respectively to method claims 85 and 101.

The methods defined by claims 85 and 101 have in common the fact that it is a synchronous network entity that applies rate adaptation to the transmission of frame based, i.e. non-synchronous, data in a local area network.

Applicants are grateful to the Examiner for explaining his position in the "Response to Arguments" section of the Office Action. Applicants note that the Examiner is of the view that it would be obvious to apply the high speed Ethernet flow control technique of Ramakrishnan *in* high speed SDH and SONET networks to prevent network congestions. Applicants are happy to accept this as confirming that the combination of Ramakrishnan and Partridge does not result in the claimed invention because, as explained above, the frame based data flow control method taught by the present invention, whilst performed by a synchronous digital network entity, is still applied in the local area network and not to data as it is being transmitted over the synchronous network. This is quite different to the Examiner's view that it would be obvious to apply the flow control technique of Ramakrishnan to switches etc of a SONET/SDH network to somehow effect flow control of data as it is being transmitted within the SONET/SDH network.

Applicants still disagree with the Examiner that one skilled in the art would ever contemplate applying the flow control taught by Ramakrishnan in a synchronous network because, given that it is synchronous, flow control is not required. If the Examiner remains of the view that forming SONET/SDH frames from incoming data at an ADM can be problematic requiring some form of flow control then applicants would appreciate a fuller explanation of how this happens. Applicants find it difficult to understand the Examiner's assertion given the fact that an ADM is a synchronous network entity having a specified number of synchronous inputs at specified transmission rates and having a specified number of outputs also at specified, although most likely different, transmission rates. The sum of the transmission rates of the inputs equals that of the outputs. It is not possible with an ADM to somehow arbitrarily add additional inputs over that specified or to somehow arbitrarily increase the specified transmission rate of any of such inputs. Therefore, it is not possible to somehow force a greater flow of data into the ADM than that of the sum of its specified inputs. How then does this lead to flow control issues that require flow control techniques to solve a flow control problem as suggested by the Examiner?

Applicants maintain as pertinent the general thrust of their submission as provided in the response of January 18, 2007 and asks that such submission be reconsidered as

part of this response particularly with respect to the fact that the claimed flow control scheme of the invention is applied at an interface (or as now claimed at a synchronous digital network multiplexer providing an interface) between the synchronous and local area network. As previously indicated, Ramakrishnan is specifically limited to flow control within Ethernet local area networks. Partridge (US Patent No. 6,370,579) is concerned with systems and methods for striping packets over multiple parallel sublinks in either a local or wide area network which sublinks are aggregated together to form a higher data rate link. Partridge is not at all concerned with flow control nor with the transmission of local area network data (such as from an Ethernet network) over a wide area network (such as a synchronous digital network).

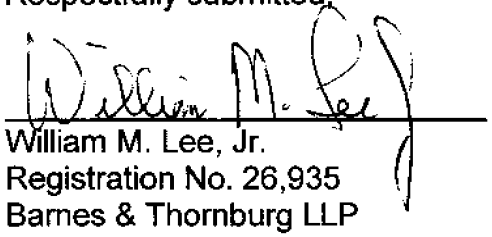
Furthermore, Ramakrishnan is concerned with determining available buffer capacity wholly within an Ethernet network. It is not concerned with monitoring a buffer in one type of network (synchronous digital network multiplexed buffer in the claimed invention) in order to exercise flow control in a different network (the local area network in the claimed invention). As such, even if the high speed Ethernet over SONET/SDH hybrid network of Partridge were modified to include the flow control scheme taught by Ramakrishnan, this would not lead to the claimed invention because the flow control scheme would be performed wholly within the Ethernet part of the hybrid network in contrast to the claimed invention where the flow control technique monitors a buffer in a synchronous digital network multiplexer in order to adapt the data transmission rate in a local area network.

The combination of Ramakrishnan and Partridge does not disclose all of the limitations of the independent claims since, at the very least, neither teaches or suggests generating at a multiplexer in a synchronous digital network a signal for adapting a first data transmission rate to a second rate for a local area network interfaced with the synchronous digital network, said second rate being lower than said first rate. Furthermore, the combination of Ramakrishnan and Partridge cannot result in the claimed invention, because Ramakriahnan is concerned with determining available buffer capacity wholly within an Ethernet network and, in the resulting hybrid network, the flow control scheme would be performed wholly within the Ethernet part of the hybrid network.

For the reasons above Applicants request favourable reconsideration of the present application and look forward to receiving a Notice of Allowance.

May 25, 2007

Respectfully submitted,



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